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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,957	02/13/2002	Norden E. Huang	GSC 13,817-4	2845

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NASA GODDARD SPACE FLIGHT CENTER  
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EXAMINER

BARBEE, MANUEL L

ART UNIT PAPER NUMBER

2857

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/073,957

Applicant(s)

HUANG, NORDEN E.

Examiner

Manuel L. Barbee

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,7-9 and 13 is/are rejected.
- 7) ☒ Claim(s) 3,5,6,10-12 and 14-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Chan K. Park on 3 October 2003.

The application has been amended as follows:

On page 7, line 11, delete "consista", and insert --consists--.

On page 12, line 33, delete "consotant's", and insert --consonant's--

On page 14, line 4, delete the first occurrence of "as", and insert --has--.

In claim 8, line 1 of the claim, delete "I".

In claim 15, line 7 of the claim, delete "seconfd", and insert --second--.

### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Art Unit: 2857

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 2, 7 and 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 7 and 8 of U.S. Patent No. 5,983,162. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Independent claims 1, 7 and 8 recite limitations for inputting an acoustical signal, instead of a physical signal as shown in claim 1 of the '162 patent. An acoustical signal is a physical signal, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to include inputting an acoustical signal, because then physical phenomenon measured by detecting acoustic signals would have been analyzed. Independent claims 1, 7 and 13 have limitations for extracting a set of intrinsic mode functions. Claims 7 and 8 of the '162 patent show iteratively generating an n-th intrinsic mode function which form a set of intrinsic mode functions.

Independent claims 1, 7 and 8 teach storing the intrinsic mode functions. Storing is an inherent method of a computer method and claim 1 of the '162 patent is a computer method. Claims 7 and 8 of the present application teach transforming the intrinsic mode functions with a Hilbert transform to generate a Hilbert spectrum. Claim 2 of the '162 patent teach transforming the intrinsic mode function with a Hilbert transform.

4. Claims 2, 4, 8 and 9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 7 and 8 of U.S. Patent No. 5,983,162 in view of Treybig et al. (US Patent No. 3,747,056).

Claims 2 and 4 depend upon claim 1 and claims 8 and 9 depend upon claim 7. The limitations of claims 1 and 7 are found in the '162 patent as discussed above. The claims of the '162 patent do not teach identifying a specific signal in the intrinsic mode function or the Hilbert spectrum, as shown in claims 2 and 8 of the present application or that the specific signal is noise as shown in claims 4 and 9 of the present application. Treybig et al. teach identifying and removing noise from seismic data which, which is measured using an acoustic signal (col. 9, lines 37-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include identifying and removing noise, because then the signal data would have been easier to analyze (Treybig et al. col. 1, lines 45-65).

#### ***Allowable Subject Matter***

5. Claims 3, 5, 6, 10-12 and 14-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel L. Barbee whose telephone number is 703-308-0979. The examiner can normally be reached on Monday-Friday from 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on 703-308-1677. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Application/Control Number: 10/073,957

Page 5

Art Unit: 2857

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0976.

mlb

  
MARC S. HOFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800